

IN THE CLAIMS

Please amend the claims as follows, substituting any amended claim(s) for the corresponding pending claim(s):

1. (Original) A method for transferring call control to a backup call server, comprising:
monitoring a primary call server to determine an active or inactive state of said primary call server; and
upon receipt of an inactive state for said primary call server, forwarding signaling messages from a signaling gateway to a backup call server wherein each signaling gateway may have a different backup call server.
2. (Original) The method of claim 1 wherein the step of forwarding signaling messages further includes encapsulating the signaling message in a data packet with the destination address of the backup server.
3. (Original) The method of claim 1 wherein the step of forwarding signaling messages further includes mapping a new destination address from the signaling gateway to the backup call server.
4. (Original) The method of claim 1 wherein a plurality of signaling gateways each distribute signaling messages destined for the primary call server to a plurality of backup call servers.
5. (Original) The method of claim 1 further including determining the primary call server has transitioned to the active state and subsequently thereto, forwarding signaling to the primary call server.
6. (Original) The method of claim 5 wherein the primary call server is provisioned to process all signaling messages it would have processed prior to transitioning to the inactive state.
7. (Original) The method of claim 5 wherein the primary call server is provisioned to process different signaling messages from what it would have processed prior to transitioning to the inactive state.
8. (Original) The method of claim 1 wherein the primary call server and backup call server each comprise one of an MSC, a G-MSC, or an HLR.
9. (Original) The method of claim 1 wherein the primary call server also functions as a backup call server and further wherein the backup call server also functions as a primary call server.

10. (Original) A method for transferring call control to a backup call server, comprising:
transmitting call setup signals between a calling party mobile station and a BSC;
transmitting call setup signals between the BSC and an originating MSC;
transmitting call setup signals between the originating MSC and a gateway-MSC (G-MSC) by way of a first signaling gateway;
transmitting call setup signals from the G-MSC to an HLR, by way of a second signaling gateway, to determine a destination MSC;
transmitting destination MSC information from the HLR to the G-MSC by way of the second signaling gateway;
upon determining that the destination MSC has failed, routing the call setup signals received from the G-MSC to a backup MSC and establishing a connection between the backup MSC and the originating MSC;
upon determining that the G-MSC has failed, routing the call setup signals received for the G-MSC to a backup G-MSC and establishing a connection between the backup G-MSC and the originating MSC; and
establishing a call connection between the calling party mobile station and a called party mobile station.

11. (Original) The method of claim 10 wherein the step of routing the call setup signals from the G-MSC to the backup MSC further comprises routing a first portion of the call setup signals from the G-MSC to a first backup MSC and a second portion of the call setup signals from the G-MSC to a second backup MSC.

12. (Original) The method of claim 10 wherein the step of routing the call setup signals from the G-MSC to the backup MSC further comprises routing a first portion of the call setup signals to a first backup G-MSC and a second portion of the call setup signals to a second backup G-MSC.

1 13. (Currently Amended) A cellular network, comprising:
2 a G-MSC for establishing call connections between originating MSCs and destination MSCs;
3 ~~an HLR~~ a HLR for providing location information to the G-MSC as a part of call setup;
4 at least one signaling gateway coupled between G-MSC and the HLR;
5 wherein the HLR determines a primary MSC to serve as a destination MSC for a call being setup
6 based upon a called party mobile station location;
7 wherein the HLR transmits call signaling messages to the at least one signaling gateway coupled
8 between the HLR and the G-MSC; and
9 wherein the at least one signaling gateway redirects the call signaling messages to a backup G-
10 MSC upon detecting that the G-MSC is in an inactive state.

1 14. (Original) A cellular network, comprising:
2 a G-MSC for establishing call connections between originating MSCs and destination MSCs;
3 a HLR for providing location information to the G-MSC as a part of call setup;
4 a first signaling gateway within a first plurality of signaling gateways coupled between each of a
5 plurality of MSCs and the G-MSC;
6 a second signaling gateway coupled between the G-MSC and the HLR;
7 wherein the HLR reports a destination MSC for a call being setup based upon a called party
8 mobile station location record maintained in the HLR;
9 wherein the HLR transmits call signaling messages to the second gateway coupled between the
10 HLR and the G-MSC; and
11 wherein the second signaling gateway redirects the call signaling messages to a first backup G-
12 MSC upon detecting that the G-MSC is in an inactive state; and
13 wherein the first signaling gateway redirects the call signaling messages to a second backup G-
14 MSC upon detecting that the G-MSC is in an inactive state.

1 15. (Original) The cellular network of claim 14 wherein the second gateway coupled between G-
2 MSC and the HLR comprises one of a plurality of signaling gateways.

1 16. (Original) The cellular network of claim 14 further comprising at least one signaling gateway
2 coupled between the G-MSC and an originating MSC.

1 17. (Original) The cellular network of claim 14 further comprising at least one signaling gateway
2 coupled between the G-MSC and a destination MSC.

18. (Original) The cellular network of claim 17 wherein at least one of the first and second backup G-
MSC also operates as a primary G-MSC.

19. (Original) A signaling gateway for a cellular network coupled to communicate with a destination
switching element and to at least one home location register, comprising:

a processor;

a memory for storing computer instructions that define the operational logic of the signaling
gateway, wherein the computer instructions include logic for:

receiving call signaling messages from one of the HLR or an initiating MSC;

determining whether the destination switching element is in an inactive state;

if the destination switching element is in an inactive state, determining a first backup
switching element; and

transparently forwarding the call signaling messages to the backup switching element.

20. (Currently Amended) The signaling gateway of ~~claim 14~~ claim 19 further including determining a
second backup switching element and transparently forwarding a first group of call signaling messages to
the first backup switching element and transparently forwarding a second group of call signaling
messages to the second backup switching element.